# **RULES**

#### OF

# THE TENNESSEE DEPARTMENT OF SAFETY DRIVER CONTROL DIVISION

# CHAPTER 1340-3-3 RULES AND REGULATIONS FOR SCHOOL BUS INSPECTION PROCEDURES

### **TABLE OF CONTENTS**

1340-3-301	Purpose	1340-3-305	School Bus Inspection Procedures
1340-3-302	Definitions	1340-3-306	Criteria for Removing Buses from Service
1340-3-303	Policies for School Bus Inspections	1340-3-307	School Bus Drivers and Training
1340-3-304	Policy for School Bus Inspection Stickers		

**1340-3-3-.01 PURPOSE.** To establish a uniform procedure for inspecting school buses and promoting school bus safety.

**Authority:** T.C.A. §§49-6-2102, 49-6-2109, and 4-4-102; Executive Order 45 (Feb. 11, 1983). **Administrative History:** Original rule filed July 20, 1989; effective October 29, 1989.

### 1340-3-3-.02 DEFINITIONS.

- (1) FMVSS. The Federal Motor Vehicle Safety Standards as defined by Title 49, part 571 of the Code of Federal Regulations.
- (2) OEM. Original Equipment Manufacturer.
- (3) School Bus Inspection Report (SF-0722)/Electronic Inspection Report. The inspection report form that is to be completed by the Department of Safety's Inspector/Trooper.

**Authority:** T.C.A. §§49-6-2102, 49-6-2109, and 4-4-102; Executive Order 45 (Feb. 11, 1983). **Administrate History:** Original rule filed December 3, 2007; effective April 29, 2008.

# 1340-3-3-.03 POLICIES FOR SCHOOL BUS INSPECTIONS.

- (1) Annual School Bus Inspections (Class I)
  - (a) School bus inspections will be conducted by a qualified inspector/trooper. Those charged with inspecting such vehicles must have completed the training program provided by the department prior to conducting inspections.
  - (b) The inspector/trooper will be responsible for ensuring that all vehicles designed for use in the school system used for the transportation of students to and from school and school-related activities will meet the requirements as identified in the State Board of Education minimum specifications for school buses. These minimum specifications can be accessed on the Board's website at <a href="http://state.tn.us/sbe/policies.html">http://state.tn.us/sbe/policies.html</a>, Links 2.400 and 2.401.
  - (c) All inspections will be coordinated through Headquarters Pupil Transportation Safety.
  - (d) Placing a vehicle out-of-service will be the responsibility of the inspector/trooper.
  - (e) The inspector/trooper shall be required to explain the reasons for noncompliance with the specifications to the Transportation Director and/or Superintendent of schools.

- (f) Upon approval of and/or noncompliance of the bus(es), the inspector/trooper shall:
  - Complete the School Bus Inspection Report (SF-0722)/Electronic Inspection Report in its entirety.
  - 2. The inspector/trooper will sign the inspection report; this will be an indicator to all receiving it that the vehicle recorded thereon is in compliance/noncompliance with the State Board of Education minimum specifications.
  - 3. Distribution of the inspection report shall be the responsibility of the inspector/trooper. This is to be done in the following manner:
    - (i) Original Upon completion of each school system, the original inspection form (SF-0722)/Electronic Inspection Report shall be presented to Pupil Transportation Safety Headquarters.
    - (ii) 1st Copy Upon completion of each bus inspected, present the Transportation Director or his designated representative the first copy as a record of completion or to serve notice of deficiencies needing repair/replacement.
    - (iii) 2nd Copy If the inspection results in an out-of-service bus, this copy serves as a record of re-inspection of indicated deficiencies. Present to the Transportation Director or his designated representative.
    - (iv) 3rd Copy School Bus Inspector/Trooper's Copy, and shall indicate the inspection history of the bus being inspected.
- (g) Special Notes: Any time a county/city or private contractor decides to put a new and/or used school bus into service for any reason, that entity must have the bus(es) inspected prior to transporting pupils.
- (h) Whenever a bus is wrecked and the damage necessitates that the bus be put out-of-service for any length of time, the bus is considered "Out-of-Service" by the Department of Safety. When the bus is repaired and road worthy, a Class I or II inspection must be conducted prior to transporting pupils.
- (2) Extended Utilization Inspections (Class II)
  - (a) All policies of the Annual School Bus Inspections (Class I) shall apply to Class II inspections.
  - (b) Class II inspections shall be conducted on all conventional buses (Class C or Class B) beginning the 13th year of service. No Class C or Class B bus is permitted to transport school pupils past 15 years of service. Dates shall be verified through an original Certificate of Title or the bus body build tag date, whichever more accurately reflects the life of the school bus.
    - 1. Any bus with over 12 years of use, but not more than 15 years of use, shall be inspected by the Commissioner of Safety or his designated representative at least 2 times annually.
      - (i) The initial inspection each year shall be a Class II inspection.
      - (ii) The second and subsequent inspections shall be a Class I or II inspection.

- (iii) The second inspection shall be conducted no less than 4 months or more than 6 months from the initial inspection.
- 2. At such inspections, the inspector/trooper shall have the authority to require repairs or reconditioning to be made which he considers necessary for the continued safe use and operation of the bus.

In addition to any other repairs, replacements or reconditioning required by the inspector/trooper, the steering, braking and exhaust system of all Class C or Class B buses with over 12 years of service shall be thoroughly reconditioned or replaced, as necessary, prior to any continued use.

If the local authority or owner refuses to take the required actions, or if the inspector/trooper considers continued use of bus to be unsafe, he/she shall order its removal from service.

(c) School Bus Inspection Report (SF-0722)/Electronic Inspection Report shall be completed on all Class II inspections and distribution made in accordance with report procedure of Class I inspections.

# (3) RANDOM SPOT CHECK INSPECTIONS (CLASS III)

- (a) All policies of the Annual School Bus Inspections (Class I) shall apply to Class III inspections.
- (b) Class III inspections shall be conducted at the discretion of the School Bus Inspectors in order to determine whether the buses can be used safely to 'protect properly the lives of school pupils.
  - 1. Class III inspections shall be conducted on buses that have annual inspections performed during the same school year.
  - 2. Dates and times for the Class III inspections shall not be announced.
  - 3. School Bus Inspectors shall determine dates and times so as not to interfere with normal operations of the school system being inspected.
  - 4. A minimum of 10% of the systems vehicles shall be inspected.
- (c) School Bus Inspection Report (SF-0722)/Electronic Inspection Report shall be completed on all Class III inspections and distribution made in accordance with report procedures of Class I inspections.

### (4) COMPLIMENTARY INSPECTION (CLASS IV)

- (a) All policies of the Annual School Bus Inspections (CLASS I) SHALL apply to Class IV inspections.
- (b) Class IV inspections are those inspections which have been requested by private school bus owner entities.
- (c) The purpose of CLASS IV inspections is to provide guidance to those entities in terms of safe transportation to their passengers.
- (d) Class IV inspections are not subject to Inspection Sticker procedures, and under no circumstances are the stickers to be affixed to said buses.

- (e) Scheduling of Class IV inspections shall be at the discretion of the School Bus Inspector.
- (f) School Bus Inspection Report (SF-0722)/Electronic Inspection Report shall be completed on each Class IV inspection and distribution of copies as follows:
  - 1. Original Headquarters Pupil Transportation Safety
  - 2. 1st Copy Owner of the bus inspected
  - 3. 2nd Copy Discard
  - 4. 3rd Copy School Bus Inspector/Trooper.
- (5) During the inspection process, inspectors will permit on-the-spot repairs to be made by school officials if they do not interfere with the ongoing inspection.
  - Every effort should be made to correct those deficiencies prior to inspection, during inspection and post inspection periods to reduce follow-up inspections.

**Authority:** T.C.A. §§49-6-2102, 49-6-2109, and 4-4-102; Executive Order 45 (February 11, 1983). **Administrative History:** Original rule filed July 20, 1989; effective October 29, 1989. Amendments filed December 3, 2007; effective April 29, 2008.

#### 1340-3-3-.04 POLICY FOR SCHOOL BUS INSPECTION STICKERS.

- (1) SCHOOL BUS INSPECTION STICKER POLICY
  - (a) The School Bus Inspection Sticker is a system of identification enabling responsible officials and law enforcement personnel to visually identify the inspection status of school buses transporting pupils.
  - (b) School Bus Inspection Stickers will consist of three (3) different and recognizable bumper decals.
    - 1. One of the 3 stickers will be affixed to the lower left-hand corner of the bus bumper upon completion of the inspection.
    - 2. Pupil Transportation Safety personnel are the only ones with the authority to affix or remove inspection stickers.
    - 3. The inspection sticker will rotate colors yearly; either yellow on black or black on yellow.
  - (c) School Bus Inspection Sticker No. 1
    - Department of Safety certification indicating the current school year upon silhouette of the State of Tennessee.
    - Affixed to those buses that were found in satisfactory condition being deficientfree at the initial inspection, having no written discrepancies requiring follow-up action.
  - (d) School Bus Inspection Sticker No. 2

- 1. Department of Safety certification indicating the current school year upon silhouette of the State of Tennessee.
- Affixed to those buses that were found in need of minor repairs but not considered an immediate threat to the safety of students, but must be corrected before final approval may be given.
  - (i) School officials shall be given a reasonable period of time to correct deficiencies.
  - (ii) A mutual time shall be decided upon by the school official and inspector/trooper for the follow-up inspection, not to exceed 30 days from the date of the initial inspection.
  - (iii) After completion of the follow-up inspection and providing all identified deficiencies have been corrected, the inspector/trooper shall remove the No. 2 sticker and affix a No. 1 sticker in its place.
  - (iv) If the identified deficiencies have not been corrected, the inspector/trooper shall remove the No. 2 sticker and affix a No. 3 (Out-of-Service) sticker in its place.
  - (v) Subsequent follow-up inspection shall be decided upon between the school officials and inspector/trooper. Once all identified deficiencies have been corrected, the No. 3 sticker will be replaced by a No. 1.
- (e) School Bus Inspection Sticker No. 3
  - Department of Safety Certification declaring "the vehicle is not to be used for transporting of students to and from school until removal of this notice by the State Safety Inspector/Trooper." The international prohibition sign is superimposed over the word "Students".

When it has been determined by the school bus inspector/trooper that a bus fails to meet the criteria as outlined in this manual that vehicle will be considered out-of-service.

When this determination has been made the inspector/trooper will affix a No. 3 sticker in the appropriate location.

When the noted deficiencies have been corrected, the inspector/trooper shall remove sticker No. 3 and affix a No. 1 in its place.

**Authority:** T.C.A. §§49-6-2102, 49-6-2109, and 4-4-102, Executive Order 45 (February 11, 1983). **Administrative History:** Original rule filed July 20, 1989; effective October 29, 1989. Amendments filed December 3, 2007; effective April 29, 2008.

### 1340-3-3-.05 PROCEDURES FOR SCHOOL BUS INSPECTIONS.

Class I, II, III & IV Inspections

- (1) The following information should be recorded on the School Bus Inspection Report (SF-0722):
  - (a) County in which the vehicle primarily operates
  - (b) Date of inspection

- (c) Commercial Driver License Number
- (d) Date of birth
- (e) Owner of bus
- (f) Driver of bus
- (g) Driver's years of service
- (h) Driver's age
- (i) Bus Number
- (j) License number
- (k) Seating arrangement
- (I) Make of chassis
- (m) Model
- (n) Make of body
- (o) Mileage
- (p) Wheel base
- (q) Years in service
- (r) Type school bus

## (2) Brake System

- (a) Adjustment The inspector/trooper shall ensure that the brakes are released, mark the pushrod next to the brake chamber or scribe the brake shoe next to the brake drum (wedge brakes). Instruct the driver to make a service brake application measured using a full brake application with the service reservoirs between 90 psi-100 psi. Make a second mark next to the brake chamber or scribe a mark on the brake shoe next to the brake drum (wedge brakes) then measure the push rod travel or brake shoe travel (wedge brakes).
  - (i) Refer to subparagraph (1)(a) of Rule 1340-3-3-.06 Criteria For Removing Buses From Service for proper brake adjustments.
- (b) Air System The inspector/trooper shall be positioned to visually check the air gauges located on the instrument panel.
  - (i) With brakes released, the inspector/trooper shall observe the air gauges for any loss of air pressure.
  - (ii) The driver shall make a full service brake application and observe the air gauges for any loss of air pressure.
  - (iii) The driver shall pump the air pressure to below the air compressor cut-in pressure. The engine shall be started and the air pressure build up shall be measured with the engine operating at a high idle (1,500 rpm) and compared to OEM specifications.

### (3) Brake System – Hydraulic

- (a) Master Cylinder The inspector/trooper shall visually check the hydraulic fluid reservoir level and check for leaks in the master cylinder unit.
- (b) Pedal Reserve With the brake pedal in the full upright position, the inspector/trooper shall measure the distance between the brake pedal and the floor or firewall. With the engine running, a single firm brake application shall be made and the distance between the brake pedal and the floor or firewall shall be measured a second time. The difference shall be recorded.

- (c) Power Assist Unit With engine off, the driver shall pump the brakes to exhaust all reserve. Hold firm pressure on the brake pedal and start the engine. The pedal should fall slightly. Failure of the pedal to fall slightly indicates a malfunction of the powerassist unit.
- (4) Brake Components Air And Hydraulic
  - (a) Brake Hoses/Tubing The inspector/trooper shall visually check all brake hoses and/or tubes.
  - (b) Brake Shoe/Pad Lining The inspector/trooper shall visually inspect all brake linings. It may be necessary to remove inspection access covers, brake dust covers or, in some instances, pull wheels and drums to accomplish the inspection.
  - (c) Brake Drum/Rotor The inspector/trooper shall visually inspect all brake drum/rotors. It may be necessary to remove inspection access covers, brake dust covers or, in some instances, pull wheels and drums to accomplish the inspection. Measurements should be taken in at least 2 locations.
- (5) Parking Brake The inspector/trooper shall have the driver set the parking brake and attempt to move the bus ahead in drive gear. The parking brake should hold the bus.
- (6) Steering System The inspector/trooper shall visually check the entire steering system.
  - (a) Steering Column/Wheel The inspector/trooper shall visually examine all u-bolts and positioning parts. The inspector/trooper shall examine all u-joints while the steering wheel is being rotated in a back and forth action to determine looseness in the u-joint.
    - (i) The inspector/trooper shall visually examine all fasteners for any worn, missing or damaged parts.
    - (ii) The driver shall manually rotate the steering wheel in a back and forth method to determine securement of the steering wheel.
    - (iii) The inspector/trooper shall measure free play with engine running for power steering.
  - (b) Front Axle Beam The inspector/trooper shall visually examine the front axle beam for cracks or welded repair.
  - (c) Steering Gear Box The inspector/trooper shall visually examine the steering gear box mounting bolts, cracks in the gear box or mounting bracket, or obvious welded repairs.
  - (d) Pitman Arm The inspector/trooper shall examine the pitman arm and output shaft connection, while the steering wheel is being rotated in a back and forth motion, for looseness in the joint. The inspector/trooper shall also visually examine the pitman arm for weld repairs.
  - (e) Power Steering The inspector/trooper shall manually manipulate the auxiliary power assist cylinder to check for looseness. The inspector/trooper shall start the bus and rotate the steering wheel in a back and forth action to ensure the power steering pump is operable.
  - (f) Ball/Socket Joints With the bus on the ground, the inspector/trooper shall examine the ball joint nut stud for movement while the steering wheel is being rocked in a back and forth action. With the bus lifted in the air, the inspector/trooper shall check for lateral

and vertical movement by grasping the tie rod and attempting to laterally and vertically move the ball joint (rotational movement will not be considered). The inspector/trooper shall examine the ball/socket joint for weld repairs.

- (g) Tie Rods/Drag Links The inspector/trooper shall visually examine all clamps, clamp bolts, and threaded joint on the tie rod and drag links for looseness.
- (h) Nuts The inspector/trooper shall visually examine all tie rods, pitman arm, drag link, steering arm and tie rod arm for looseness and missing fasteners.
- (i) Hoses/Fluids The inspector/trooper shall visually examine the power steering fluid reservoir and hoses for leaks. The inspector/trooper shall check the power steering fluid level.

# (7) Suspension Components

(a) Axle Parts/Members - The inspector/trooper shall visually examine all springs, spring hangers, king pins, ball joints, struts, shock absorbers, air bags, u-bolts, and other axle positioning components for missing, broken, cracked, loose or worn components.

### (8) Chassis/Frame/Unibody

- (a) Frame The inspector/trooper shall visually inspect the entire frame.
- (b) Cross Members The inspector/trooper shall visually inspect each frame cross member, outrigger and other structural supports.
- (c) Outriggers/Body Supports The inspector/trooper shall visually inspect all body outriggers and body supports.
- (d) Bumpers The inspector/trooper shall visually inspect each bumper.

### (9) Exhaust System

(a) Leaks - With the vehicle safely secured (in park, brakes set, wheels chocked or other method), the inspector/trooper shall examine the entire exhaust system for leaks and loose components.

## (10) Fuel System

(a) Fuel Container/Connection - The inspector/trooper shall visually examine the fuel tank and all components of the fuel system.

### (11) Drive Shaft

- (a) Drive Shaft Guard The inspector/trooper shall visually inspect and manually verify the presence, securement and proper placement of all required drive shaft guards.
- (b) Universal Joints The inspector/trooper shall check for lateral and vertical movement of the universal joints by grasping the universal joint and attempting to move the joint laterally and vertically.

### (12) Differential

 (a) Housing - The inspector/trooper shall visually check the differential for cracks and leaks.

## (13) Engine

- (a) Components The inspector/trooper shall visually examine and monitor the engine operations.
- Leaks The inspector/trooper shall visually examine the engine for any signs of fluid leaks

# (14) Tire/Wheels/Hubs

- (a) Tire Tread Depth The inspector/trooper shall measure the tire tread depth at 3 points, spaced equally around the tire in the same major tread groove.
- (b) Tire Sidewall The inspector/trooper shall visually check each tire, on both sides, for cuts, wearing or damage that exposes plycord. Also, inspect for any bumps, bulges or knots related to sidewall or tread separation.
- (c) Tire Inflation The inspector/trooper shall physically measure tire air pressure on any tire that appears low.
- (d) Tire Type The inspector/trooper shall examine all tires to ensure that the load range and size meet or exceed manufacturers' recommendations for the bus. The inspector/trooper shall examine all tires to ensure that all tires on the same axle match.
- (e) Wheels/Rims/Spiders The inspector/trooper shall visually inspect each wheel, rim and spider for broken, missing, damaged or loose nuts, bolts, studs, and lugs. Each wheel/rim shall be visually inspected for cracks, proper seating, damage or welds.
- (f) Hub With front wheels raised, alternately apply sufficient inward force to upper and lower edges of tire to obtain maximum travel. Measure play at lower out board edge of tire. Spin tire and listen for noise in wheel bearing.

# (15) Aisle

- (a) Clearance The inspector/trooper shall measure the width of each aisle for compliance:
  - (i) 12 inches minimum at seat cushion
  - (ii) 15 inches minimum at top of seat backs
  - (iii) 12 inches minimum to emergency doors
  - (iv) 30 inches minimum from wheelchair or mobility aid position to closest emergency door and lift area.
- (16) Obstruction The inspector/trooper shall visually inspect all aisles and exits.

# (17) Electrical

(a) Wiring - The inspector/trooper shall examine all visible wiring and electrical components.

### (18) Battery

(a) Condition - The inspector/trooper or bus operator shall attempt to start bus.

- (b) Wires The inspector/trooper shall examine the wiring leading from the battery for loose, corroded or exposed wires.
- (c) Battery Securement The inspector/trooper shall visually and manually check to see that the battery is secured to prevent movement.

# (19) Windshield Wipers

(a) Operation - The inspector/trooper shall visually check for presence of all required windshield wipers. With wipers operating, inspector/trooper shall verify normal wiper operation.

# (20) Body Interior

- (a) Panels The inspector/trooper shall visually inspect all interior panels for sharp edges, loose or protruding panels, which may cause injury.
- (b) Floors The inspector/trooper shall visually inspect the floor for perforations and openings.
- (c) Step Well The inspector/trooper shall visually and manually check to ensure that all parts of the step well are supported and undamaged.
- (d) Step Tread The inspector/trooper shall visually examine the step treads.
- (e) Handrail The inspector/trooper shall visually check for required handrail(s) and shall examine all handrails for compliance with handrail safety recalls.
- (f) Seats/Barriers The inspector/trooper shall visually and manually check each seat and barrier for securement, material integrity and compliance with FMVSS No. 222, School Bus Passenger Seating and Crash Protection.
- (g) Seat (Driver) The inspector/trooper shall ensure that the driver's seat has a full range of motion and locks securely in any position. The inspector/trooper shall visually and manually check the driver's restraint assembly for proper assembly, attachment and driver securement.
- (h) Door (Entrance) The inspector/trooper shall instruct the driver to operate the entrance door through the full range of motion ensuring proper operation and that the handle locks in the closed position. The inspector/trooper shall examine the entrance door for locks, padlocks or other non-OEM locking devices.
- (i) Doors (Emergency Exits) The inspector/trooper/driver shall manually operate each emergency door for ease of operation as designed and to insure operation of the warning device and hold open device. The inspector/trooper shall examine the emergency door for locks, padlocks or other non-OEM locking device.
- (21) Windows The inspector/trooper shall visually inspect each windshield and window.
  - (a) Windows (Emergency Exits) The inspector/trooper/driver shall manually operate each emergency window for ease of operation as designed and to ensure operation of the warning device.
  - (b) Defrosters The inspector/trooper shall instruct the driver to activate each defroster to check for proper operation.

- (22) Body Exterior
  - (a) Panels/Rub Rails/Trim The inspector/trooper shall visually inspect each body part, panel, rub rail and trim piece for loose, torn, dislocated or protruding part, which may snag or catch clothing or otherwise cause a hazard.
  - (b) Compartment Doors The inspector/trooper shall manually and visually inspect each engine, battery, luggage or other door for proper securement and operation.
  - (c) Mirrors The inspector/trooper shall visually examine all mirrors to ensure all are present, as required, and examine for breakage and discoloration. The inspector/trooper shall examine each mirror to ensure it will hold a set adjustment.

# (23) Lamps and Signals

- (a) Lamps The inspector/trooper shall check all lamps for proper operation.
- (b) Horn The inspector/trooper shall verify normal horn operation.
- (c) Gauges/Brake Warning The inspector/trooper shall examine all gauges for proper operation and shall cause all brake failure warning lamps and/or low air warning indicators to operate so proper operation may be verified.
- (d) Stop Arm/Optional Crossing Device The inspector/trooper shall instruct the driver to cause each required stop arm(s) and/or each crossing control device to extend verifying normal operation.

# (24) Emergency Equipment

- (a) Fire Extinguisher The inspector/trooper shall visually check for compliance and securement.
- (b) Other State Required Equipment See State Board of Education's minimum specifications located at: http://state.tn.us/sbe/policies.hmtl, Links 2.400 and 2.401.
- (25) Wheelchair Equipped Vehicles The inspector/trooper shall visually inspect and operate all wheelchair lifts, securement systems and all required wheelchair occupant restraint systems.

## Class II Inspection

- (26) Criteria for the Class II inspection shall be the same as that of the Class I inspection.
- (27) Upon visual indication of hardware or component failure within the wheel assembly, the inspector/trooper will inform the maintenance supervisor/owner of the school bus of such. With such notification made, the inspector/trooper will require the removal of parts from the wheel assembly as to allow necessary inspection that a determination can be made regarding said failure.

Authority: T.C.A. §§49-6-2102, 49-6-2109, and 4-4-102; Executive Order 45 (February 11, 1983). Administrative History: Original rule filed July 20, 1989; effective October 29, 1989. Repeal and new rule filed December 3, 2007; effective April 29, 2008.

# 1340-3-3-.06 CRITERIA FOR REMOVING BUSES FROM SERVICE.

When one (1) or more of the following items have been found to be unsatisfactory as set forth in these rules, it shall be cause for placing the bus out of service until the unsatisfactory item(s) has been repaired

or replaced in such a manner that it will meet these requirements. The determination to place the vehicle out of service shall be made by the school bus inspector/trooper.

# (1) Brake System

(a) Adjustment - Any one brake beyond the adjustment limit specified as follows:

# **Brake Adjustment Specifications**

Brake adjustment: Shall be less than those specifications contained herein relating to "Brake Adjustment Limit." (Dimensions are in inches.)

# Clamp Type Brake Chamber Data

Туре	Outside Diameter	Brake Adjustment Limit
6	4 ½	1 1/4
9	5 ¼	1 3/8
12	5 11/16	1 3/8
16	6 3/8	1 3/4
20	6 25/32	1 3/4
24	7 7/32	1 3/4
30	8 3/32	2
36	9	2 1/4

# 'Long Stroke' Clamp Type Brake Chamber Data

Type	Outside Diameter	Brake Adjustment Limit
16	6 3/8	2.0
20	6 25/32	2.0
24	7 7/32	2.0
24*	7 7/32	2.5
30	8 3/32	2.5

<sup>\*</sup> For 3" maximum stroke type 24 chambers

### Tie Rod Style Piston Brake Chamber Data

Size	Outside Diameter	Brake Adjustment Limit
30	6 1/2 (165mm)	2.5 (64mm)

Bolt Type Brake Chamber Data

RULES AND REGULATIONS FOR SCHOOL BUS INSPECTION PROCEDURES CHAPTER 1340-3-3

(Rule 1340-3-3-.06, continued)

valo i	Type	Outside Diameter	Brake Adjustment Limit
	A	6 15/16	1 3/8
	В	9 3/16	1 3/4
	С	8 1/16	1 3/4
	D	5 1/4	1 1/4
	Е	6 3/16	1 3/8
	F	11	2 1/4
	G	9 7/8	2
		Rotochamber Data	
	Туре	Outside Diameter	Brake Adjustment Limit
	9	4 9/32	1 1/2
	12	4 13/16	1 1/2
	16	5 13/32	2
	20	5 15/16	2
	24	6 13/32	2
	30	1 1/6	2 1/4
	36	7 5/8	2 3/4
	50	8 7/8	3
		Dd-3 Brake Chamber Data	
	Туре	Outside Diameter	Brake Adjustment Limit
	30	8 1/8	2 1/4

Note: This chamber has three air lines and is found on motorcoaches.

# Wedge Brake Data

The combined movement of both brake shoe lining scribe marks shall not exceed 1/8 inch (3.18mm).

- (b) Air System Fails to maintain pressure when:
  - 1. The leakage rate (brakes released) exceeds 2psi/min.
  - 2. The leakage rate (brakes applied) exceeds 3psi/min.
  - 3. Fails to recover air pressure as recommended.

- (2) Brake System (Hydraulic)
  - (a) Master Cylinder
    - 1. The reservoir is below minimum level.
    - 2. Any leak of fluid in the master cylinder unit or system.
  - (b) Pedal Reserve Fails to maintain manufacturer designed height and travel requirements. (OEM).
  - (c) Power Assist Unit Fails to function as designed. (OEM).
- (3) Brake Components (Air and Hydraulic)
  - (a) Brake Hoses/Tubing
    - 1. Brake hose with any damage extending through the outer reinforcement ply.
    - 2. Any bulge or swelling when brakes are applied.
    - 3. Any restriction due to cracked, broken or crimped line/hose.
    - 4. Any line, tubing, hose or connection that is not constructed to meet all applicable manufacturing codes and standards. (OEM).
  - (b) Brake Shoe/Pad Lining
    - Any lining/pad worn to the recommended replacement measurement or wear mark.
    - 2. Lining pad is broken, not firmly attached to shoe or plate, or is contaminated with oil or grease.
    - 3. Fails to make contact with drum (frozen, binding, uneven).
  - (c) Brake Drum/Rotor Any drum or rotor that is cracked, improperly mounted, or worn beyond manufacturer's discard specifications.
    - (i) Note: Do not confuse short hairline heat check cracks with flexural cracks.
- (4) Parking Brake Not present or working as designed.
- (5) Steering System Any modification or other condition that interferes with the free movement of any steering component.
  - (a) Steering Column/Wheel
    - 1. Any absence or looseness of U bolt(s) or positioning part(s).
    - 2. Any worn, missing or damaged fastener.
    - 3. Steering wheel not properly secured.
    - 4. Steering wheel free play fails to meet the performance test specified as follows:

Steering Wheel Free Play: Steering wheel free play shall not exceed the requirements listed in the following chart:

Steering Wheel Diameter Manual System Movement 30 Power System Movement 45

16" (41cm)	2" (5.1cm)	41/2"(11.5cm)
18" (46cm)	2 1/4" (5.4cm)	4 3/4" (12cm)
20" (51cm)	2 1/2" (6.4cm)	51/4"(13.5cm)
22" (56cm)	2 3/4" (7cm)	53/4"(14.5cm)

- (b) Front Axle Beam Any crack(s) or obvious welded repair.
- (c) Steering Gear Box
  - 1. Any mounting bolt(s) loose or missing.
  - 2. Any crack(s) in gearbox or mounting brackets.
  - 3. Any obvious welded repair.
- (d) Pitman Arm
  - 1. Any looseness of the pitman arm on the steering gear output shaft.
  - 2. Any obvious welded repair.
- (e) Power Steering
  - 1. Auxiliary power assist cylinder loose.
  - 2. Power steering pump inoperable.
- (f) Ball/Socket Joints
  - 1. Any movement under steering load of a nut stud.
  - 2. Any motion, other than rotational, between any linkage member and its attachment point of more than 1/8 inch measured with hand pressure only.
  - 3. Any obvious welded repair.
- (g) Tie Rods/Drag Links
  - 1. Loose clamp(s) or clamp bolt(s) on tie rod or drag links.
  - 2. Any looseness in any threaded joint.
- (h) Nuts Loose or missing fasteners on tie rod, pitman arm, drag link, steering arm or tie rod arm.
- (i) Hoses/Fluids Any faulty fluid control device, leak or empty reservoir.
- (6) Suspension Components
  - (a) Axle Parts/Members

- 1. Any U-bolt or other spring to axle clamp bolt(s) which are cracked, broken, loose or missing.
- 2. Any spring hanger(s), or other axle positioning parts which are cracked, broken, loose or missing that results in shifting of an axle from its normal position.
- 3. Any worn (beyond manufacturer's specifications) or improperly assembled U bolt, shock, king pin, ball joint, strut, air bag or positioning component (OEM).
- 4. Any spring hanger, assembly part or leaf which is broken or missing.
- 5. Any broken coil spring.

# (7) Chassis/Frame/Unibody

- (a) Frame
  - 1. Any cracked, loose, sagging or broken frame side rail.
  - 2. Any obvious bend or damage resulting from a collision.
  - 3. Any worn or loose mounting hole.
- (b) Cross Members Any cross member, outrigger or other structural support which is cracked missing, deformed or has rust holes.
- (c) Outriggers/Body Support Any missing, broken, shifted or corroded part that would affect the safe operation of the vehicle.
- (d) Bumpers Any bumper which is missing or not secured.
- (8) Exhaust System
  - (a) Leaks Any part of the exhaust system which is leaking or discharging under the passenger or engine compartment.
- (9) Fuel System
  - (a) Fuel Container/Connection
    - 1. Any fuel tank not securely attached to the vehicle.
    - 2. Any part of the fuel system not properly secured or fastened.
    - 3. Any liquid fuel leak at any point.
- (10) Driveshaft
  - (a) Drive Shaft Guard Loose, missing, improper placement or bent guards.
  - (b) Universal Joint(s) Worn or faulty, or obviously repair-welded universal joint(s).
- (11) Differential
  - (a) Housing Cracked or leaking housing.

#### RULES AND REGULATIONS FOR SCHOOL BUS INSPECTION PROCEDURES CHAPTER 1340-3-3

(Rule 1340-3-3-.06, continued)

- (12) Engine
  - (a) Components Any Critical component that fails to function as designed.
  - (b) Leaks Any fluid leaks that would affect the safe operation of the engine.
- (13) Tires/Wheels/Hubs
  - (a) Tire Tread Depth Any front tire worn to less than 4/32 inch or any rear tire worn to less than 2/32 inch.
  - (b) Tire Sidewall
    - 1. Any sidewall that is cut, worn or damaged to the extent that the ply cord is exposed.
    - 2. Any observable bump, bulge or knot related to sidewall or tread separation.
  - (c) Tire Inflation Tire is flat or has noticeable leak.
  - (d) Tire Type Not of proper type (load range, size, mismatched, etc.)
  - (e) Wheels/Rims/Spiders
    - 1. Any nuts, bolts, studs or lugs that are broken, missing, damaged or loose.
    - 2. Any wheel/rim that is cracked, improperly seated, damaged, or welded.
  - (f) Hub Excessive wheel bearing or king pin play that exceeds 1/4 inch.
- (14) Aisle
  - (a) Clearance Aisle does not have the required clearance.
  - (b) Obstruction There are objects blocking aisles or exits.
- (15) Electrical
  - (a) Wiring Any required wire or electrical component that is charred or showing evidence of being burnt or exposed.
- (16) Battery
  - (a) Condition
    - 1. Battery will not activate the starter.
    - 2. Leaking or excess corrosion.
  - (b) Wires Wiring is exposed or loose.
  - (c) Battery Securement Battery not secured.
- (17) Windshield Wipers

Operation - Wiper fails to work or is missing. Wiper does not clean windshield sweep area.

#### RULES AND REGULATIONS FOR SCHOOL BUS INSPECTION PROCEDURES CHAPTER 1340-3-3

(Rule 1340-3-3-.06, continued)

#### (18) Body Interior

- (a) Panels Any panel (ceiling, side, wheel well, etc.) protruding, having sharp edges or not secured, that may cause injuries.
- (b) Floors Floor pan or inner panels that have excessive perforated areas or openings sufficient to cause a hazard to an occupant.
- (c) Step Well Any part of the step well or support structure that is damaged.
- (d) Step Tread Any condition that would present a tripping hazard.

## (e) Handrail

- 1. Missing or loose.
- 2. Fails the nut/drawstring test or has not complied with safety recall. The test can be found at: http://www.nhtsa.dot.gov/people/injury/buses/handrail/handrail.html

# (f) Seats/Barriers

- 1. Any seat/barrier that is not secured properly.
- 2. Any seat/barrier material so defective that it compromises the integrity of occupant protection and compartmentalization.
- 3. Seat spacing fails to comply with FMVSS 222.

# (g) Seat (Driver)

- 1. Fails to adjust or hold proper adjustment.
- 2. Any part of the driver's safety restraint assembly is missing, not properly installed or so defective as to prevent proper securement.

### (h) Door (entrance)

- 1. The entrance door does not open or close properly.
- 2. Door control handle does not lock in the closed position.
- 3. Door is equipped with a padlock or similar non-OEM locking device (Excludes vehicles equipped with an interlock system).

# (i) Doors (emergency exits)

- 1. Any emergency door(s) that does not open freely or completely as designed.
- 2. Any emergency door warning device that is defective.
- 3. Door or roof hatch is equipped with a padlock or similar non-OEM locking device (Excludes vehicles equipped with an interlock system).
- 4. Door hold open device is missing or inoperative.

- (19) Windows
  - (a) Any glass or glazing that is broken through or missing.
  - (b) Not of approved type.
  - (c) Windshield has discoloration or other damage in that portion extending upward from the height of the topmost portion of the steering wheel, but not including a 2 inch border at the top and a 1 inch border at each side of the windshield or each panel thereof, except as follows are allowed:
    - 1. Coloring or tinting applied in manufacture, for reduction of glare;
    - 2. Any crack not over 1/4 inch long, if not intersected by any other crack;
    - 3. Any damage area, which can be covered by a disc 3/4 inch in diameter, if not closer than 3 inches to any other such damaged area.
  - (d) Drivers side area window(s) have chips, clouding, or cracks that obscure the driver's vision.
  - (e) Windows (emergency exits)
    - 1. Any Emergency window that fails to open properly.
    - 2. Lacks the required number of emergency windows/roof hatches (Fails to comply with FMVSS No. 217).
    - 3. Required audible warning device(s) not working properly.
    - 4. Not properly labeled inside or outside (fails to comply with FMVSS No. 217).
  - (f) Defrosters Fail to operate.

#### (20) Body Exterior

- (a) Panels, Rub Rails, Trim Any body part that is loose, torn, dislocated or protruding from the surface of the bus, creating a hazard.
- (b) Compartment Doors Any engine, battery or other door that is not secured properly.
- (c) Mirrors Any required mirror that is missing, broken, discolored or will not hold a set adjustment.

### (21) Lamps/Signals

- (a) Lamps Any one of the following lamps not working: Brake, turn signal, tail, head (low beam), school bus warning lamps (amber or red), emergency, or stop arm lamp.
- (b) Horn Fails to function as designed.
- (c) Gauges/Brake Warning Any critical brake, telltale lamp, buzzer or gauge that fails to function as designed.
- (d) Stop Arm/Optional Crossing Device Required stop arm(s), or if equipped with a crossing control device fails to function properly.

## (22) Emergency Equipment

- (a) Fire Extinguisher Any required fire extinguisher(s) which is missing, not of proper type/size, not fully charged, has no pressure gauge, is not secured or is not accessible to the driver or that does not have an up-to-date inspection tag affixed to it.
- (b) Other State Required Equipment Any state required equipment (such as first aid kit and body fluid kit, belt cutter and emergency reflectors) that if not functioning correctly the state specifies is an out-of-service item. See State Board of Education's minimum specifications located at: http://state.tn.us/sbe/policies.html, Links 2.400 and 2.401.

# (23) Wheelchair Equipped Vehicles

- (a) Wheelchair lift does not function as designed or is inoperable.
- (b) Any hydraulic line leaking during lift operation.
- (c) Wheelchair tie-down is missing or improperly installed loose or damaged.
- (d) Any required wheelchair occupant restraint system not in compliance.
- (24) Other Unsafe Conditions Should the school bus inspector/trooper identify any other condition or conditions not listed above, but in his/her judgment which renders the bus to be unsafe for the transportation of students, the bus shall be placed out-of-service. In the event a bus is placed out-of-service for reasons as described above, the inspector/trooper shall secure approval for such action from the Supervisor of Pupil Transportation Safety.

**Authority:** T.C.A. §§49-6-2102, 49-6-2109, and 4-4-102; Executive Order 45 (February 11, 1983). **Administrative History:** Original rule filed July 20, 1989; effective October 29, 1989. Repeal and new rule filed December 3, 2007; effective April 29, 2008.

### 1340-3-3-.07 SCHOOL BUS DRIVERS AND TRAINING.

### (1) Driver Training Programs

- (a) All drivers having a CDL license with the school bus endorsement for the privileges to operate school buses will be required to attend and satisfactorily complete all state sponsored training programs pursuant to T.C.A. §49-6-2102 in order to keep the endorsement class license, unless such school district as a whole wishes to be considered for a state training exemption. Training exemptions may be granted when determination that a school district already meets or exceeds minimum safety training requirements for school bus drivers as established by the Department of Safety.
  - Any driver failing to attend state-sponsored or state-authorized exemption training sessions the first year will need attendance exemption from the County Board Administrator or Program Director in writing to the Tennessee Pupil Transportation Division.
- (b) Any downgrade licensing action against a school bus operator for failing to meet minimum training requirements to maintain a school bus endorsement on their CDL shall be preceded by notification as established in Section (b) of T.C.A. §55-50-502, permitting request for a hearing before adverse licensing action is initiated.
- (c) The school bus endorsement downgrading action will occur at the conclusion of each school year.

- 1. Downgrading will occur no later than July 1 of each year.
- 2. Drivers not meeting the minimum training requirements stated in this Rule 1340-3-3-.07 will be downgraded.
- 3. Drivers that have their school bus endorsement removed may reapply for the endorsement and have operating privileges restored upon satisfactorily completing the required safety training as mandated for all other Tennessee School Bus Drivers and complying with the laws and regulations for reinstatement of the endorsement through required testing by the Tennessee Department of Safety Drivers License Issuance Division.
- (d) Note: Drivers of School buses utilized for "school activity" purposes shall possess a CDL license with the passenger and school bus endorsement.
  - 1. School Activity purposes related to field trips, ball trips, band camps and other non-regular route use that is sanctioned by the board of education on either board-owned, contractor-owned or school-owned equipment.
  - 2. All other adverse actions against school bus endorsement privileges shall be governed by provisions of T.C.A. §55-50-502.

**Authority:** T.C.A. §§49-6-2102, 49-6-2109 and 4-4-102; Executive Order 45 (February 11, 1983). **Administrative History:** Original rule filed July 20, 1989; effective October 29, 1989. Repeal and new rule filed December 3, 2007; effective April 29, 2008.